

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776719

Luminaire Tested: HCDJBS4050CSD-HCD6TRMW-5000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD6TRMW-5000lm-5000K
Description: 6 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5248.4 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.18
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

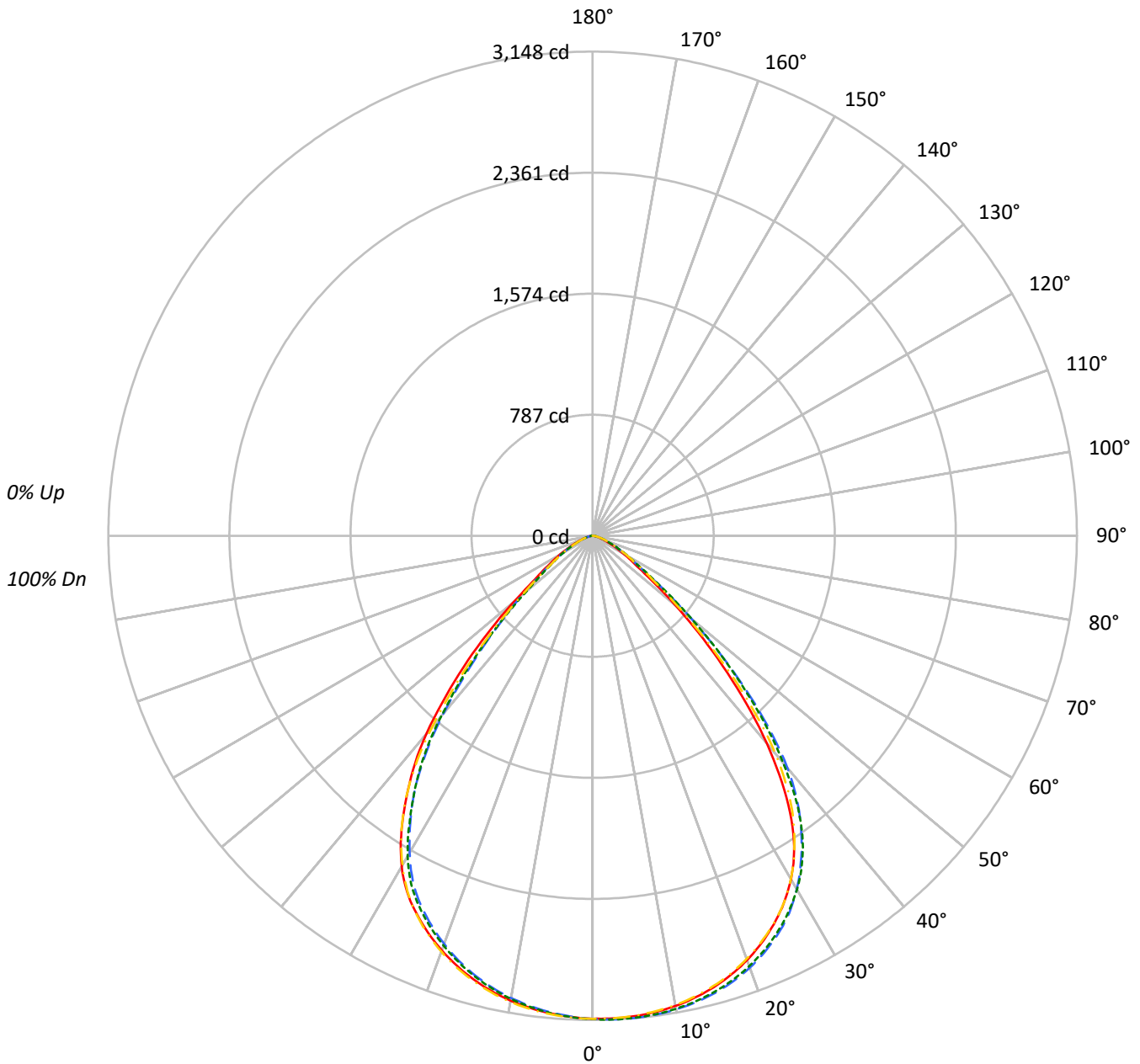
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90								
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81								
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72								
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65								
5	85	75	68	62	83	74	67	62	72	66	62	70	65	61	69	64	60	59								
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53								
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48								
8	70	59	51	46	69	58	51	46	57	51	46	56	50	46	55	49	46	44								
9	66	54	47	43	65	54	47	42	53	47	42	52	46	42	51	46	42	40								
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	172201	172201	172201	172201
5°	172512	173123	171577	171467
10°	172776	173828	170855	170209
15°	172487	174172	169541	168276
20°	171276	173679	167309	165384
25°	168536	171947	163897	161138
30°	163259	168114	157144	152258
35°	150771	159023	142064	134883
40°	125993	137808	120404	109462
45°	92769	106244	88932	77566
50°	59529	71622	57218	47862
55°	35583	43191	37399	32429
60°	25064	29384	27092	23573
65°	17122	20845	19081	16876
70°	11749	15099	13304	12214
75°	8112	11205	9468	8832
80°	5525	8587	6756	6282
85°	2453	6730	3963	3648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 109438 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.4	5.7
10°-20°	850.1	16.2
20°-30°	1262.2	24.0
30°-40°	1354.4	25.8
40°-50°	907.7	17.3
50°-60°	369.4	7.0
60°-70°	147.6	2.8
70°-80°	50.4	1.0
80°-90°	9.2	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2409.6	45.9
0°-40°	3764.0	71.7
0°-60°	5041.2	96.1
0°-90°	5248.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5248.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3141	3141	3141	3141	3141	
5°	3135	3146	3118	3116	3135	298
15°	3039	3069	2987	2965	3039	857
25°	2786	2843	2710	2664	2786	1280
35°	2253	2376	2123	2016	2253	1386
45°	1197	1370	1147	1000	1197	923
55°	372	452	391	339	372	359
65°	132	161	147	130	132	136
75°	38	53	45	42	38	43
85°	4	11	6	6	4	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2
0.5°	3139.7	3141.2	3143.1	3144.6	3145.1	3144.6	3140.7	3137.8	3138.3	3138.3	3139.7
1°	3140.7	3142.6	3144.6	3146.0	3146.5	3145.6	3140.7	3137.3	3136.8	3136.3	3137.3
1.5°	3140.7	3143.6	3146.0	3147.5	3147.0	3145.6	3140.7	3136.3	3135.8	3133.9	3134.9
2°	3140.2	3144.1	3147.0	3148.5	3147.5	3146.0	3140.2	3135.4	3133.9	3131.5	3132.0
2.5°	3139.7	3144.6	3147.5	3149.0	3148.0	3146.0	3139.7	3133.9	3132.0	3129.1	3129.1
3°	3139.2	3144.6	3148.0	3149.4	3148.0	3145.6	3138.8	3132.5	3130.0	3126.1	3126.1
3.5°	3138.8	3144.6	3148.5	3149.4	3148.0	3145.1	3137.3	3130.5	3127.1	3122.7	3122.3
4°	3137.8	3144.6	3148.0	3149.4	3147.5	3144.1	3135.8	3128.1	3124.2	3119.3	3118.9
4.5°	3136.3	3143.6	3148.0	3149.4	3147.0	3143.1	3134.4	3126.1	3121.3	3115.5	3115.0
5°	3134.9	3143.1	3147.5	3148.5	3146.0	3141.7	3132.0	3123.2	3117.9	3111.6	3110.6
5.5°	3133.4	3141.7	3146.5	3148.0	3145.1	3139.7	3130.0	3120.3	3114.5	3107.2	3105.8
6°	3131.0	3140.7	3145.6	3147.0	3143.6	3137.8	3127.6	3116.9	3110.6	3102.8	3101.4
6.5°	3128.6	3138.8	3144.1	3145.6	3141.7	3135.8	3124.7	3113.5	3106.7	3098.0	3096.0
7°	3126.1	3137.3	3142.6	3144.1	3140.2	3133.4	3121.3	3109.6	3102.4	3092.6	3090.7
7.5°	3123.2	3134.9	3140.7	3142.2	3137.8	3130.5	3118.4	3105.8	3097.5	3087.3	3084.9
8°	3119.8	3132.5	3138.8	3140.2	3135.4	3127.6	3114.5	3101.4	3092.6	3081.5	3079.1
8.5°	3116.4	3130.0	3136.3	3137.8	3132.9	3124.7	3110.6	3096.5	3086.8	3075.7	3072.7
9°	3112.1	3127.1	3133.9	3135.4	3129.5	3120.8	3106.7	3091.7	3081.5	3069.3	3065.5
9.5°	3108.2	3123.7	3130.5	3132.5	3126.1	3117.4	3101.9	3086.3	3075.7	3062.5	3058.7
10°	3103.8	3120.3	3127.6	3129.1	3122.7	3113.5	3097.0	3081.0	3069.3	3055.3	3051.9
10.5°	3099.0	3115.9	3123.7	3125.7	3118.4	3108.7	3092.2	3074.7	3063.0	3048.0	3044.1
11°	3093.6	3112.1	3119.8	3121.8	3114.5	3104.3	3086.8	3068.9	3055.8	3040.7	3035.9
11.5°	3088.3	3107.2	3115.5	3117.9	3109.6	3099.0	3081.0	3062.1	3048.5	3032.5	3027.6
12°	3082.0	3102.4	3111.1	3113.0	3105.3	3093.1	3074.7	3055.3	3040.7	3023.7	3018.9
12.5°	3075.7	3096.5	3106.2	3108.2	3099.9	3087.8	3068.4	3048.0	3032.9	3015.0	3009.6
13°	3069.3	3091.2	3101.4	3103.3	3094.1	3081.5	3061.6	3040.2	3024.2	3005.8	3000.4
13.5°	3062.5	3085.4	3095.6	3097.5	3088.3	3075.2	3054.3	3032.5	3015.5	2996.0	2990.2
14°	3055.3	3079.5	3089.7	3091.7	3082.5	3068.4	3047.0	3023.7	3006.7	2985.9	2979.5
14.5°	3047.5	3072.3	3083.4	3085.8	3075.7	3061.1	3038.8	3015.0	2997.0	2975.7	2968.9
15°	3039.2	3065.5	3076.6	3079.5	3068.9	3053.8	3030.5	3005.8	2987.3	2965.0	2957.7
15.5°	3031.0	3057.7	3069.3	3072.7	3061.1	3046.0	3022.3	2997.0	2976.6	2953.3	2946.0
16°	3021.8	3049.9	3062.1	3065.0	3053.3	3037.8	3013.5	2986.8	2966.4	2941.7	2933.9
16.5°	3012.6	3041.7	3054.3	3057.2	3045.6	3029.1	3004.3	2976.6	2955.3	2930.0	2921.8
17°	3002.4	3033.4	3046.5	3049.4	3036.8	3020.3	2994.6	2965.9	2943.6	2917.4	2909.2
17.5°	2992.6	3024.2	3037.8	3040.7	3028.1	3010.6	2984.4	2955.3	2932.0	2904.3	2895.6
18°	2982.0	3014.5	3028.6	3032.0	3018.4	3000.9	2973.7	2943.6	2919.8	2891.2	2882.0
18.5°	2970.8	3004.8	3019.3	3022.3	3008.7	2990.7	2962.6	2932.0	2907.7	2877.6	2867.9
19°	2959.6	2994.1	3009.2	3012.6	2998.5	2980.0	2951.4	2919.8	2894.6	2864.0	2853.3
19.5°	2948.0	2983.4	2999.0	3002.4	2988.3	2968.9	2939.7	2907.7	2881.5	2849.4	2838.3
20°	2935.9	2972.3	2988.3	2992.2	2977.1	2957.2	2927.6	2894.6	2867.9	2834.9	2823.2
20.5°	2923.2	2960.6	2976.6	2981.0	2965.9	2945.6	2915.0	2881.5	2853.8	2818.9	2807.7
21°	2909.6	2948.5	2965.5	2969.3	2953.8	2932.9	2901.9	2867.9	2839.3	2803.8	2791.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2867.4	2909.2	2927.1	2932.5	2916.0	2893.6	2860.6	2824.2	2794.1	2753.8	2740.2
23°	2851.9	2895.1	2914.0	2918.9	2901.9	2879.1	2845.6	2809.2	2777.6	2736.3	2722.3
23.5°	2835.9	2880.5	2899.4	2904.8	2887.8	2864.0	2830.0	2793.6	2761.6	2718.9	2703.8
24°	2819.8	2865.5	2885.4	2890.7	2873.2	2849.0	2814.5	2777.1	2744.6	2700.9	2684.9
24.5°	2803.3	2849.4	2869.3	2875.7	2858.2	2833.9	2799.0	2760.6	2727.1	2682.5	2666.0
25°	2786.3	2833.4	2854.3	2860.6	2842.7	2817.9	2782.5	2743.6	2709.6	2663.5	2646.5
25.5°	2768.4	2817.4	2837.8	2844.1	2826.6	2801.4	2765.5	2726.6	2691.7	2643.6	2626.2
26°	2750.4	2800.4	2821.3	2828.1	2810.1	2784.9	2748.5	2708.7	2672.8	2622.8	2604.3
26.5°	2731.5	2782.5	2802.8	2811.1	2793.1	2766.9	2730.0	2690.2	2653.3	2599.9	2581.0
27°	2712.6	2763.5	2785.4	2793.1	2775.2	2749.0	2711.1	2670.3	2632.9	2576.2	2556.3
27.5°	2691.2	2744.6	2766.0	2774.7	2756.7	2730.5	2691.2	2649.5	2611.6	2551.9	2530.0
28°	2671.3	2724.2	2745.6	2755.3	2737.8	2711.1	2670.3	2627.6	2588.3	2526.2	2502.4
28.5°	2648.5	2702.8	2723.2	2734.9	2719.4	2691.2	2649.0	2605.3	2564.0	2499.5	2473.7
29°	2626.6	2680.5	2701.9	2713.5	2698.5	2670.8	2626.2	2581.0	2538.8	2469.8	2442.7
29.5°	2602.9	2657.7	2678.6	2691.2	2677.6	2649.0	2602.9	2556.3	2511.6	2440.2	2411.1
30°	2579.1	2633.9	2654.8	2668.4	2655.8	2627.1	2577.6	2529.6	2482.5	2409.7	2378.6
30.5°	2552.4	2608.7	2629.1	2644.6	2633.9	2602.9	2551.9	2501.4	2452.9	2377.6	2345.6
31°	2526.6	2582.5	2603.8	2619.8	2610.1	2578.6	2525.7	2472.8	2420.8	2343.6	2310.6
31.5°	2498.0	2555.8	2576.6	2593.1	2585.4	2553.3	2497.5	2442.7	2387.8	2308.7	2277.1
32°	2468.4	2527.1	2548.0	2566.9	2560.1	2526.2	2469.4	2410.1	2353.3	2273.2	2241.7
32.5°	2436.8	2497.5	2519.4	2538.3	2532.9	2499.0	2439.3	2377.1	2316.9	2235.9	2206.3
33°	2405.3	2466.9	2489.7	2509.6	2504.8	2470.3	2408.7	2342.7	2280.0	2198.0	2168.9
33.5°	2370.3	2436.4	2459.7	2479.6	2475.2	2439.7	2377.6	2307.7	2241.7	2158.7	2132.5
34°	2333.0	2403.8	2429.6	2448.5	2444.6	2409.7	2345.6	2270.8	2202.9	2117.4	2092.2
34.5°	2293.1	2371.8	2398.0	2417.4	2411.1	2375.2	2312.6	2232.0	2163.5	2076.6	2053.8
35°	2252.9	2336.4	2365.5	2383.9	2376.2	2341.7	2277.6	2193.6	2122.8	2034.9	2012.1
35.5°	2210.6	2301.4	2332.5	2350.4	2340.2	2306.3	2242.7	2156.3	2083.4	1992.2	1969.4
36°	2165.0	2264.5	2299.5	2316.0	2301.9	2270.8	2205.8	2115.5	2042.7	1948.5	1923.7
36.5°	2117.9	2227.6	2263.5	2281.0	2261.1	2231.5	2166.9	2076.6	2001.9	1903.8	1878.1
37°	2070.3	2187.3	2227.6	2244.1	2218.4	2191.2	2125.7	2035.4	1959.2	1858.7	1829.1
37.5°	2020.8	2146.1	2188.3	2204.8	2173.2	2148.0	2083.4	1996.1	1916.9	1814.0	1779.1
38°	1970.3	2101.9	2149.5	2165.0	2125.7	2105.3	2039.8	1952.9	1873.7	1764.5	1728.6
38.5°	1918.9	2057.2	2107.2	2122.3	2077.6	2057.2	1994.6	1911.6	1829.6	1714.5	1676.7
39°	1867.4	2009.7	2063.1	2078.6	2029.1	2008.7	1947.5	1866.0	1783.5	1663.1	1620.8
39.5°	1814.5	1958.7	2016.5	2032.0	1978.1	1957.2	1898.5	1820.8	1733.9	1612.6	1565.0
40°	1760.6	1904.8	1968.9	1982.5	1925.7	1903.4	1847.5	1770.3	1682.5	1556.3	1507.2
40.5°	1706.3	1849.5	1917.9	1930.1	1874.7	1846.6	1794.1	1719.9	1628.6	1501.4	1448.5
41°	1650.4	1792.7	1864.0	1875.2	1821.8	1789.8	1739.3	1665.5	1573.3	1447.5	1390.7
41.5°	1593.7	1735.4	1810.6	1818.4	1768.9	1732.5	1681.5	1611.6	1518.4	1393.7	1332.0
42°	1535.4	1677.1	1753.8	1759.7	1713.6	1673.7	1621.3	1552.9	1462.1	1337.3	1277.2
42.5°	1476.7	1620.8	1696.6	1701.4	1659.2	1613.6	1563.1	1496.1	1409.2	1284.4	1223.8
43°	1418.4	1564.0	1635.9	1644.1	1603.4	1556.8	1504.3	1437.3	1356.3	1230.1	1171.3
43.5°	1361.6	1507.7	1577.1	1585.9	1544.1	1496.6	1446.1	1379.6	1303.9	1178.1	1119.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1196.6	1336.4	1395.1	1411.6	1370.4	1319.9	1268.4	1212.1	1147.1	1023.8	973.8
45.5°	1143.7	1279.1	1333.0	1354.3	1312.6	1262.6	1210.7	1157.3	1095.1	975.7	928.6
46°	1089.8	1222.8	1271.3	1297.5	1258.7	1205.8	1151.9	1102.9	1044.2	928.6	884.9
46.5°	1035.9	1167.0	1212.6	1241.2	1204.3	1151.4	1096.1	1048.5	993.2	884.0	841.7
47°	982.5	1109.7	1153.4	1183.5	1150.5	1098.0	1039.8	993.2	943.2	838.3	801.4
47.5°	932.0	1055.3	1096.1	1126.7	1095.6	1046.1	986.9	940.8	895.1	797.1	762.6
48°	882.0	1000.9	1039.8	1071.8	1042.2	996.1	934.9	889.8	848.0	756.3	725.7
48.5°	833.0	948.0	986.9	1017.5	990.3	948.0	886.4	840.3	802.4	717.5	688.8
49°	786.4	896.1	934.4	963.6	939.3	899.5	838.3	792.2	755.8	679.6	654.8
49.5°	742.2	844.6	884.0	912.6	888.8	851.9	793.2	746.6	712.1	643.7	621.8
50°	698.0	795.1	833.0	861.1	839.8	806.3	748.5	703.9	670.9	609.7	590.3
50.5°	656.3	747.1	785.9	811.1	791.7	761.6	707.8	663.1	630.1	577.7	560.2
51°	616.0	700.5	739.8	761.6	747.1	718.9	668.4	624.7	592.2	547.6	531.5
51.5°	577.7	655.8	695.6	716.5	702.9	678.1	632.0	589.3	557.3	518.4	503.9
52°	541.2	614.1	652.9	672.3	661.6	637.4	596.6	555.3	525.7	490.8	478.1
52.5°	506.8	575.2	612.6	629.6	619.9	599.0	563.6	524.3	496.1	465.0	453.9
53°	474.3	538.8	574.3	588.8	581.1	564.1	532.0	496.1	470.9	441.7	433.0
53.5°	445.1	504.8	537.9	551.9	544.2	530.6	502.9	469.9	447.6	421.3	411.6
54°	418.0	472.8	504.4	517.0	509.2	499.0	476.2	446.1	428.6	400.5	390.8
54.5°	394.2	444.2	471.3	484.5	476.7	469.9	451.0	426.7	409.7	380.1	369.9
55°	372.3	418.0	441.3	454.4	451.9	446.1	429.6	407.8	391.3	359.7	348.5
55.5°	351.9	394.2	414.1	427.2	427.7	422.8	408.7	388.3	372.3	342.2	331.5
56°	334.0	371.4	388.8	401.9	402.9	399.5	387.4	368.9	353.4	326.2	316.0
56.5°	318.0	350.5	366.5	378.6	378.1	376.2	366.0	349.5	337.4	311.2	302.4
57°	304.4	332.0	346.1	357.3	353.9	352.9	345.1	333.5	322.3	299.0	290.3
57.5°	291.3	316.0	327.7	337.9	335.9	335.4	328.1	318.0	308.2	286.4	278.1
58°	278.6	302.4	312.6	320.9	319.4	318.9	313.1	304.8	296.1	274.3	266.0
58.5°	266.0	289.3	299.5	306.8	306.3	305.8	300.5	292.7	283.5	262.1	253.4
59°	252.9	276.7	286.9	294.2	293.2	293.2	287.9	280.1	271.4	250.0	241.7
59.5°	240.8	263.6	273.8	281.5	280.6	280.6	275.7	267.5	258.7	238.3	230.6
60°	228.6	251.0	260.7	268.4	268.0	267.5	262.6	255.8	247.1	227.2	219.9
60.5°	216.5	238.3	248.1	255.8	254.8	254.8	250.5	243.7	235.9	216.5	209.2
61°	205.3	226.7	235.9	243.2	242.7	242.7	238.8	232.5	224.8	206.3	199.0
61.5°	194.7	215.0	224.3	231.1	230.1	231.1	227.2	221.4	213.6	196.6	189.8
62°	184.5	204.4	212.6	219.4	218.9	219.4	216.5	210.7	202.9	186.9	180.6
62.5°	174.3	194.2	201.9	208.2	207.8	208.7	205.8	200.5	192.7	177.7	171.8
63°	165.5	184.0	191.7	197.6	197.6	198.1	195.6	190.8	183.0	168.4	163.1
63.5°	157.3	173.3	182.0	187.9	187.4	188.3	185.9	181.5	173.3	159.7	155.3
64°	148.5	165.0	173.8	178.2	178.2	178.6	176.7	172.8	164.1	151.5	147.6
64.5°	140.3	156.8	165.0	169.9	169.4	169.9	168.0	163.6	155.3	143.7	140.3
65°	132.0	148.5	156.8	161.6	160.7	161.6	159.7	155.3	147.1	136.4	133.0
65.5°	124.3	140.3	148.5	153.4	152.4	153.4	151.5	147.6	139.3	129.1	126.7
66°	117.5	132.5	140.3	145.6	144.7	145.6	144.2	139.8	131.6	121.8	119.9



TEST NUMBER: P776719

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	98.5	112.1	119.4	123.3	123.3	124.3	123.3	118.9	111.2	103.4	102.4
68°	93.2	106.3	113.1	117.0	117.0	118.0	117.0	112.6	104.9	97.6	97.1
68.5°	87.4	100.0	106.8	110.7	110.7	111.6	110.7	106.8	99.0	92.2	91.7
69°	82.5	94.7	101.5	104.9	104.9	105.8	105.3	101.0	93.7	86.9	86.9
69.5°	77.7	89.3	95.6	99.0	99.5	100.0	99.5	95.1	88.3	82.0	82.0
70°	73.3	84.0	90.8	94.2	94.2	95.1	94.2	90.3	83.0	77.7	77.7
70.5°	68.9	79.6	85.4	88.8	88.8	89.8	89.3	84.9	78.2	72.8	73.3
71°	64.6	74.8	81.1	84.0	84.5	84.9	84.5	80.6	73.8	68.9	69.4
71.5°	60.7	70.4	76.7	79.6	79.6	80.6	80.1	75.7	69.4	64.6	65.5
72°	56.8	66.5	72.3	75.2	75.2	76.2	75.7	71.4	65.5	60.7	61.6
72.5°	53.4	62.6	68.0	70.9	70.9	71.8	71.4	67.5	61.6	57.3	58.3
73°	50.0	58.7	64.1	67.0	67.0	68.0	67.5	63.1	57.8	53.9	54.9
73.5°	47.1	54.9	60.7	63.1	63.6	64.1	63.6	59.7	54.4	50.5	51.5
74°	44.2	51.5	56.8	59.7	59.7	60.7	59.7	55.8	51.0	47.1	48.5
74.5°	41.3	48.5	53.4	56.3	56.3	56.8	56.3	52.4	47.6	44.2	45.1
75°	38.3	45.6	50.5	52.9	52.9	53.9	52.9	49.5	44.7	41.7	42.2
75.5°	35.9	42.7	47.1	49.5	50.0	50.5	50.0	46.1	41.7	38.8	39.8
76°	33.5	39.8	44.2	46.6	47.1	47.6	46.6	43.2	39.3	36.4	37.4
76.5°	31.1	36.9	41.7	43.7	44.2	44.7	43.7	40.8	36.9	33.5	35.0
77°	28.6	34.5	38.8	41.3	41.3	41.7	41.3	38.3	34.0	31.1	32.5
77.5°	26.7	32.0	36.4	38.3	38.8	39.3	38.8	35.4	31.6	28.6	30.1
78°	24.8	29.6	34.0	35.9	36.4	36.9	36.4	33.0	29.1	26.7	27.7
78.5°	22.8	27.7	31.6	33.5	34.0	34.5	33.5	30.6	27.2	24.8	25.7
79°	20.9	25.7	29.1	31.6	31.6	32.0	31.1	28.2	25.2	22.8	23.8
79.5°	18.9	23.8	27.2	29.1	29.1	29.6	29.1	26.2	23.3	20.9	21.8
80°	17.5	21.8	25.2	27.2	27.2	27.7	26.7	23.8	21.4	18.9	19.9
80.5°	16.0	19.9	23.3	25.2	25.2	25.7	24.8	21.8	19.4	17.5	18.4
81°	14.6	18.0	21.4	23.3	23.3	23.8	22.8	20.4	18.0	15.5	16.5
81.5°	12.6	16.5	19.4	21.4	21.4	21.8	21.4	18.4	16.0	14.1	15.0
82°	11.7	15.0	18.0	19.9	19.9	19.9	19.4	16.5	14.6	12.6	13.6
82.5°	10.2	13.1	16.5	18.0	18.0	18.4	18.0	15.0	13.1	11.2	12.1
83°	8.7	11.7	15.0	16.5	16.5	17.0	16.0	13.6	11.7	9.7	10.7
83.5°	7.8	10.2	13.6	15.0	15.0	15.5	14.6	12.1	10.2	8.3	9.2
84°	6.3	9.2	11.7	13.6	13.6	14.1	13.1	10.7	8.7	6.8	8.3
84.5°	5.3	7.8	10.7	12.1	12.1	12.6	11.7	9.2	7.8	5.8	7.3
85°	3.9	6.3	9.2	10.7	10.7	11.2	10.2	7.8	6.3	4.4	5.8
85.5°	2.9	5.3	8.3	9.7	9.7	9.7	9.2	6.8	5.3	3.9	4.9
86°	2.4	4.4	6.8	8.3	8.3	8.7	7.8	5.8	3.9	2.9	3.9
86.5°	1.9	3.4	5.8	7.3	7.3	7.3	6.8	4.9	3.4	2.4	2.9
87°	1.5	2.9	4.9	5.8	5.8	6.3	5.8	3.9	2.4	1.9	1.9
87.5°	1.0	2.4	3.9	4.9	4.9	4.9	4.9	3.4	1.9	1.5	1.5
88°	0.5	1.5	2.9	3.9	3.9	3.9	3.4	2.4	1.5	0.5	0.5
88.5°	0.0	1.0	1.9	2.9	2.9	2.9	2.4	1.9	1.0	0.0	0.0



TEST NUMBER: P776719
CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776719

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3141.2	3141.2	3141.2	3141.2	3141.2	3141.2
0.5°	3140.7	3142.2	3142.6	3139.7	3138.3	3139.7
1°	3138.8	3140.2	3141.2	3139.2	3138.3	3140.7
1.5°	3136.3	3137.8	3139.7	3138.3	3137.8	3140.7
2°	3133.4	3135.8	3137.3	3136.8	3136.8	3140.2
2.5°	3130.5	3132.9	3135.4	3135.4	3135.8	3139.7
3°	3127.1	3130.0	3132.9	3133.4	3134.9	3139.2
3.5°	3123.7	3127.1	3130.0	3131.5	3133.4	3138.8
4°	3120.3	3123.2	3127.1	3129.1	3132.0	3137.8
4.5°	3115.9	3119.8	3123.7	3126.1	3130.0	3136.3
5°	3111.6	3115.9	3119.8	3123.2	3127.6	3134.9
5.5°	3106.7	3111.1	3115.9	3120.3	3125.2	3133.4
6°	3101.9	3106.7	3111.6	3116.4	3122.3	3131.0
6.5°	3097.0	3101.9	3107.2	3113.0	3119.3	3128.6
7°	3090.7	3096.0	3102.4	3108.7	3115.5	3126.1
7.5°	3085.4	3090.7	3097.5	3104.3	3112.1	3123.2
8°	3079.1	3084.4	3092.2	3099.4	3108.2	3119.8
8.5°	3072.7	3078.6	3086.3	3094.6	3104.3	3116.4
9°	3065.9	3071.8	3080.0	3089.2	3099.4	3112.1
9.5°	3058.7	3065.0	3073.7	3083.4	3094.6	3108.2
10°	3051.4	3057.7	3066.9	3077.6	3089.2	3103.8
10.5°	3043.6	3050.4	3060.1	3070.8	3083.9	3099.0
11°	3034.9	3042.2	3052.4	3064.0	3078.1	3093.6
11.5°	3026.6	3033.9	3044.6	3056.7	3071.8	3088.3
12°	3017.4	3025.2	3035.9	3049.4	3065.0	3082.0
12.5°	3008.7	3015.9	3027.6	3041.7	3058.2	3075.7
13°	2998.5	3006.7	3018.4	3033.4	3050.9	3069.3
13.5°	2988.3	2997.0	3009.2	3024.7	3043.1	3062.5
14°	2977.6	2986.8	2999.4	3015.5	3034.9	3055.3
14.5°	2966.9	2975.7	2989.2	3006.2	3026.6	3047.5
15°	2955.8	2965.0	2979.1	2996.5	3017.9	3039.2
15.5°	2944.1	2953.8	2967.9	2986.3	3008.2	3031.0
16°	2932.0	2941.7	2956.2	2975.7	2999.0	3021.8
16.5°	2919.8	2930.0	2944.6	2965.0	2988.8	3012.6
17°	2906.7	2917.4	2932.9	2953.3	2978.1	3002.4
17.5°	2894.1	2904.3	2920.3	2941.7	2966.9	2992.6
18°	2879.5	2891.2	2907.7	2930.0	2955.8	2982.0
18.5°	2866.0	2877.6	2894.6	2916.9	2943.6	2970.8
19°	2851.4	2863.5	2881.0	2903.8	2931.5	2959.6
19.5°	2836.3	2849.4	2866.9	2890.7	2919.3	2948.0
20°	2820.8	2834.9	2852.8	2877.1	2906.2	2935.9
20.5°	2805.3	2819.8	2838.3	2863.0	2892.6	2923.2
21°	2789.3	2804.3	2822.7	2848.0	2878.6	2909.6

TEST NUMBER: P776719

CATALOG NUMBER: HCDJBLS4050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2738.3	2755.3	2774.7	2801.4	2833.9	2867.4
23°	2720.3	2737.8	2757.7	2784.9	2817.4	2851.9
23.5°	2701.9	2719.4	2740.7	2767.9	2800.9	2835.9
24°	2683.4	2701.4	2722.3	2749.9	2783.9	2819.8
24.5°	2664.5	2682.9	2704.3	2732.0	2766.4	2803.3
25°	2645.1	2664.0	2685.4	2713.5	2748.5	2786.3
25.5°	2624.7	2644.1	2666.4	2694.6	2730.0	2768.4
26°	2602.4	2623.7	2645.1	2674.2	2711.1	2750.4
26.5°	2579.6	2601.4	2623.2	2652.4	2691.7	2731.5
27°	2554.8	2578.6	2599.5	2630.0	2671.3	2712.6
27.5°	2528.6	2552.9	2575.2	2606.7	2649.5	2691.2
28°	2501.4	2527.1	2549.5	2581.0	2627.6	2671.3
28.5°	2473.2	2498.0	2522.3	2555.8	2603.8	2648.5
29°	2443.1	2468.9	2494.1	2529.6	2579.6	2626.6
29.5°	2412.6	2437.3	2464.5	2501.9	2554.3	2602.9
30°	2379.6	2405.3	2433.4	2472.3	2527.6	2579.1
30.5°	2345.6	2368.9	2400.9	2443.6	2500.4	2552.4
31°	2310.1	2334.4	2366.0	2412.6	2470.8	2526.6
31.5°	2274.7	2296.5	2331.0	2381.5	2440.7	2498.0
32°	2236.4	2257.2	2294.6	2348.0	2409.7	2468.4
32.5°	2197.5	2216.0	2257.2	2316.0	2377.1	2436.8
33°	2157.2	2178.6	2218.9	2282.0	2342.7	2405.3
33.5°	2115.5	2138.3	2179.1	2246.1	2308.2	2370.3
34°	2074.2	2097.5	2139.8	2207.2	2272.3	2333.0
34.5°	2032.0	2055.3	2099.0	2169.4	2233.9	2293.1
35°	1988.3	2015.5	2058.7	2129.1	2194.1	2252.9
35.5°	1944.6	1974.7	2018.4	2087.3	2153.3	2210.6
36°	1899.5	1933.0	1975.7	2040.7	2109.7	2165.0
36.5°	1854.3	1888.8	1933.4	1997.0	2064.0	2117.9
37°	1807.2	1843.6	1888.8	1949.5	2014.5	2070.3
37.5°	1759.2	1797.5	1841.7	1900.9	1965.0	2020.8
38°	1709.7	1748.5	1793.2	1849.5	1910.1	1970.3
38.5°	1657.2	1696.6	1742.7	1796.1	1856.8	1918.9
39°	1603.8	1642.2	1690.7	1739.8	1797.0	1867.4
39.5°	1549.5	1585.9	1634.4	1682.5	1739.3	1814.5
40°	1494.1	1529.6	1578.6	1623.3	1678.6	1760.6
40.5°	1439.8	1474.2	1519.9	1564.0	1619.9	1706.3
41°	1384.4	1419.9	1462.1	1503.8	1560.6	1650.4
41.5°	1329.1	1367.0	1404.3	1444.6	1500.9	1593.7
42°	1275.2	1314.5	1347.1	1385.4	1440.7	1535.4
42.5°	1221.3	1262.1	1289.8	1326.2	1383.5	1476.7
43°	1167.9	1210.7	1234.4	1266.0	1325.2	1418.4
43.5°	1114.5	1156.3	1179.1	1208.7	1267.9	1361.6



TEST NUMBER: P776719

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	965.5	1000.5	1015.5	1040.8	1103.9	1196.6
45.5°	918.9	949.5	963.1	988.3	1053.4	1143.7
46°	873.8	900.9	911.1	937.8	1003.9	1089.8
46.5°	827.7	853.4	860.7	889.8	954.8	1035.9
47°	785.4	806.8	812.6	841.2	906.8	982.5
47.5°	745.1	760.2	767.0	797.1	859.7	932.0
48°	707.3	716.0	722.8	753.9	813.6	882.0
48.5°	668.4	673.8	681.5	712.6	770.4	833.0
49°	633.5	634.0	642.2	673.8	726.7	786.4
49.5°	600.0	596.1	605.3	636.9	685.4	742.2
50°	568.4	561.2	570.9	601.0	644.6	698.0
50.5°	537.4	528.1	538.3	567.0	607.3	656.3
51°	510.2	499.5	508.2	535.9	570.9	616.0
51.5°	483.5	473.8	481.5	506.8	537.4	577.7
52°	458.2	450.5	456.8	479.1	506.3	541.2
52.5°	437.4	429.1	433.5	452.9	476.7	506.8
53°	417.0	409.2	412.6	428.6	449.0	474.3
53.5°	396.6	390.3	392.2	405.8	422.8	445.1
54°	375.7	372.8	373.8	384.5	399.0	418.0
54.5°	355.3	355.8	356.3	364.6	377.2	394.2
55°	337.9	339.3	339.3	346.1	357.3	372.3
55.5°	322.3	323.8	323.8	328.6	338.3	351.9
56°	308.2	309.7	309.7	313.6	321.4	334.0
56.5°	295.6	297.6	297.1	300.5	307.3	318.0
57°	283.5	284.9	284.9	287.9	294.7	304.4
57.5°	271.4	272.8	272.3	275.2	282.0	291.3
58°	259.2	260.7	260.2	262.6	269.4	278.6
58.5°	247.1	248.5	247.6	250.5	256.3	266.0
59°	235.9	236.9	236.4	238.3	243.7	252.9
59.5°	224.8	226.2	225.2	226.7	232.0	240.8
60°	213.6	215.0	214.1	216.0	220.9	228.6
60.5°	203.9	204.8	203.9	205.3	209.7	216.5
61°	194.2	195.1	193.7	195.1	199.0	205.3
61.5°	184.5	185.4	184.5	185.9	189.3	194.7
62°	175.7	176.7	175.2	176.7	180.1	184.5
62.5°	167.0	168.9	167.0	168.4	171.4	174.3
63°	158.7	161.2	159.2	160.7	163.1	165.5
63.5°	151.0	152.9	151.5	152.4	154.9	157.3
64°	143.7	145.1	143.7	144.7	146.6	148.5
64.5°	136.4	136.9	135.9	136.4	138.3	140.3
65°	129.6	130.1	129.1	129.6	131.1	132.0
65.5°	122.8	123.3	122.3	122.8	123.8	124.3
66°	116.5	117.0	116.0	116.5	117.0	117.5



TEST NUMBER: P776719

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	99.5	100.0	99.0	99.0	99.0	98.5
68°	94.2	94.7	93.7	94.2	93.2	93.2
68.5°	89.3	89.8	88.8	88.8	88.3	87.4
69°	84.5	84.9	84.0	84.5	83.0	82.5
69.5°	80.1	80.6	79.6	79.6	78.6	77.7
70°	75.7	76.2	75.2	75.2	73.8	73.3
70.5°	71.4	71.8	70.9	70.9	69.4	68.9
71°	67.5	68.0	67.0	67.0	65.5	64.6
71.5°	63.6	64.1	63.1	63.1	61.6	60.7
72°	60.2	60.2	59.7	59.7	57.8	56.8
72.5°	56.8	56.8	56.3	56.3	54.4	53.4
73°	53.4	53.4	52.9	52.9	51.0	50.0
73.5°	50.0	50.5	49.5	49.5	47.6	47.1
74°	47.1	47.1	46.6	46.6	44.7	44.2
74.5°	44.2	44.2	43.7	43.7	41.7	41.3
75°	41.7	41.7	41.3	40.8	39.3	38.3
75.5°	39.3	38.8	38.3	38.3	36.4	35.9
76°	36.9	36.4	35.9	35.4	34.0	33.5
76.5°	34.5	34.0	33.5	33.5	31.6	31.1
77°	32.0	32.0	31.6	31.1	29.1	28.6
77.5°	29.6	29.6	29.1	28.6	27.2	26.7
78°	27.2	27.7	27.2	26.7	24.8	24.8
78.5°	25.2	25.7	25.2	24.8	22.8	22.8
79°	23.3	23.8	23.3	22.8	21.4	20.9
79.5°	21.8	21.8	21.4	20.9	19.4	18.9
80°	19.9	19.9	19.9	18.9	17.5	17.5
80.5°	18.0	18.4	18.0	17.5	16.0	16.0
81°	16.5	17.0	16.5	16.0	14.6	14.6
81.5°	15.0	15.5	15.0	14.6	12.6	12.6
82°	13.6	14.1	13.6	13.1	11.2	11.7
82.5°	12.1	12.1	12.1	11.7	9.7	10.2
83°	10.7	11.2	10.7	10.2	8.3	8.7
83.5°	9.7	9.7	9.2	8.7	7.3	7.8
84°	8.3	8.3	8.3	7.8	6.3	6.3
84.5°	7.3	7.3	6.8	6.8	4.9	5.3
85°	5.8	5.8	5.8	5.8	4.4	3.9
85.5°	4.9	4.9	4.9	4.4	3.4	2.9
86°	3.9	3.9	3.9	3.4	2.9	2.4
86.5°	2.9	2.9	2.4	2.4	1.9	1.9
87°	1.5	1.9	1.5	1.5	1.5	1.5
87.5°	0.5	1.0	0.5	1.0	1.0	1.0
88°	0.0	0.0	0.0	0.0	0.5	0.5
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776719

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRMW-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°

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Scaled Data Report



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Scaled Data Report





21.5°	2896.0	2935.9	2952.8	2957.7	2941.7	2920.3	2888.8	2853.8	2824.7	2787.3	2774.7
22°	2882.0	2922.7	2940.7	2945.1	2929.1	2907.2	2874.7	2839.3	2809.6	2770.8	2757.7



44°	1305.8	1450.9	1516.0	1528.1	1485.4	1437.8	1385.9	1322.3	1251.9	1124.2	1069.9
44.5°	1250.9	1392.7	1455.8	1469.9	1426.7	1379.1	1325.2	1267.4	1199.0	1074.2	1021.8



66.5°	110.7	125.7	132.5	137.4	136.9	137.9	136.9	132.5	124.3	115.5	114.1
67°	104.4	118.4	125.7	130.1	130.1	131.1	129.6	125.7	117.5	109.2	108.2



89°	0.0	0.5	1.0	1.9	1.9	1.9	1.5	1.0	0.5	0.0	0.0
89.5°	0.0	0.0	0.5	1.0	1.0	1.0	1.0	0.5	0.0	0.0	0.0

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21.5°	2772.7	2788.3	2807.2	2832.9	2864.0	2896.0
22°	2755.8	2771.8	2790.7	2817.4	2849.4	2882.0



44°	1064.1	1103.4	1124.2	1152.4	1211.6	1305.8
44.5°	1014.5	1051.9	1068.9	1096.6	1157.3	1250.9



66.5°	110.7	111.2	110.2	110.7	110.7	110.7
67°	104.9	105.3	104.4	104.9	104.9	104.4

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89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)